DETAILED ACTION

1. Applicant's amendments filed January 11, 2010 are acknowledged. Claim 16 has been canceled, and claims 1-15 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 5, 6, 12, and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

4. With regard to claim 5, the claim specifies that "the selection of the *second* gear ratio in the vehicle transmission is conditioned upon a comparison of information indicating the *first* degree of plugging of the filter (320) and a predetermined boundary value" (italics mine). The written description does not support the concept that the selection of the second gear ratio is conditioned upon a comparison of information indicating the first degree of plugging and a predetermined boundary value. This is a new matter situation. For the purpose of examination, it was presumed that applicant intended to have claim 5 specify that "the selection of the second gear ratio in the

vehicle transmission is conditioned upon a comparison of information indicating the second degree of plugging of the filter (320) and a predetermined boundary value", as that concept is supported by the written description.

5. With regard to claim 6, the claim specifies that “said *second* selected gear ratio is maintained during a time interval depending on the *first* degree of plugging” (italics mine). The written description does not support the concept that the second selected gear ratio is maintained during a time interval depending on the first degree of plugging. This is a new matter situation. For the purpose of examination, it was presumed that applicant intended to have claim 6 specify that "said second selected gear ratio is maintained during a time interval depending on the second degree of plugging", as that concept is supported by the written description.

6. With regard to claim 12, the claim specifies that the control means “are configured to select the *second* gear ratio in the vehicle transmission depending on a comparison of information indicating the *first* degree of plugging of the filter (320) and a predetermined boundary value” (italics mine). The written description does not support the concept that the control means are configured to select the second gear ratio depending on a comparison of the first degree of plugging of the filter and a predetermined value. This is a new matter situation. For the purpose of examination, it was presumed that applicant intended to have claim 12 specify that the control means "are configured to select the second gear ratio in the vehicle transmission depending on a comparison of information indicating the second degree of plugging of the filter (320) and a predetermined boundary value".

7. With regard to claim 13, the claim specifies that the control means are "configured to maintain the *second* gear ratio during a time interval depending on the *first* degree of plugging of the filter" (italics mine). The written description does not support the concept that the control means are configured to maintain the second gear ratio during a time interval depending on the first degree of plugging of the filter. This is a new matter situation. For purposes of examination, it was presumed that applicant intended to have claim 13 specify that the control means are "configured to maintain the second gear ratio during a time interval depending on the second degree of plugging of the filter".

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1, 3-8, and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0145582 by Bunting et al. (hereafter referred to as "Bunting").

12. With regard to claim 1, Bunting teaches a method of regenerating (reads on *cleaning*) a particle trap exhaust filter during operation of a vehicle that has an internal combustion engine, a transmission drivable by said engine, and an exhaust system that includes a filter that receives exhaust from the internal combustion engine (Par. 0001; Par. 0012-0014; Par. 0036; Par. 0041; Par. 0042; Par. 0068; Par. 0077; Figure 1). In the regeneration method of Bunting, the pressure differential across the filter is measured (in step 136 of Figure 2B), and as taught by Bunting, that measurement is indicative of the degree of plugging of the filter (Par. 0077, 0059, 0044, 0064; Figure 2B). This measurement of the pressure differential provides a parameter that Bunting refers to as the regeneration parameter (Par. 0077). This regeneration parameter is compared to standard regeneration parameter values (which are the different regions

shown in Figure 6), and depending on the degree of plugging, a different gear ratio in the transmission (item 42' in Figure 12) can be selected in order to increase the exhaust gas temperature such that the filter is exposed to hotter exhaust gas that can regenerate the filter (Par. 0077; Figures 2B and 14). Bunting teaches that if the filter is determined by the pressure differential measurement to be plugged to a certain extent, a gear ratio is selected in order to produce high temperature exhaust gas that can serve to regenerate the filter, and Bunting teaches that if the filter is determined by the pressure differential measurement to be plugged to a larger extent, a gear ratio is selected in order to produce higher temperature exhaust gas that can serve to regenerate the filter (Par. 0077). Bunting teaches repeating this process of measuring the pressure differential, comparing the resulting regeneration parameter to standard regeneration parameter values, and selecting an appropriate gear ratio such that the process is repeated multiple times in order to ensure regeneration of the filter (Par. 0077 and 0059; Figures 14 and 2B).

13. Bunting does not explicitly teach an embodiment of his method in which after using a first degree of plugging as indicated by a pressure differential measurement to select a first gear ratio in the transmission in order to produce high temperature exhaust gas, the process is repeated such that a second degree of plugging – as indicated by a pressure differential measurement – is used to select a second gear ratio in the transmission in order to produce high temperature exhaust gas.

14. Bunting teaches repeating the process of measuring the pressure differential, comparing the resulting regeneration parameter to standard regeneration parameter

values, and selecting an appropriate gear ratio such that regeneration of the filter can be advantageously ensured while the vehicle is operated, and Bunting teaches that depending on the degree of plugging, exhaust temperature values of different magnitudes can be produced in order to ensure regeneration of the filter. Therefore, it is reasonably expected that Bunting's method could be performed such that after a first degree of plugging – as indicated by a first pressure differential measurement – is used to select a first gear ratio in the transmission in order to produce exhaust gas at a first high temperature, a second degree of plugging – as indicated by a second pressure differential measurement – is used to select a second gear ratio in the transmission in order to produce exhaust gas at a second, higher temperature. Not every iteration of Bunting's algorithm will result in the above described outcome in which high temperature exhaust gas is produced after taking a first pressure differential measurement and higher temperature exhaust gas is produced after taking a second pressure differential measurement, but after performing enough iterations of Bunting's algorithm, it is reasonably expected that the above described outcome will occur.

15. Although Bunting, as discussed thus far, teaches the process of selecting a first gear ratio in order to produce high temperature gas for removing undesired filter particles that were detected with a first pressure differential measurement and selecting a second gear ratio in order to produce higher temperature gas for removing undesired filter particles that were detected with a second pressure differential measurement, Bunting does not explicitly teach that the filter contains different particles that are removed at the different temperatures.

16. Lemaire teaches that the particles trapped in a vehicle's particle trap filter vary in size, and Lemaire teaches that the differently sized particles have different temperatures at which they can be released from the filter (Col. 1, 17-25; Col. 6, 13-47; Table 2).

17. Although Bunting does not explicitly teach that his filter contains different particles that are removed at the different temperatures used in his filter regeneration method, it is known in the art of vehicular particle trap filters that particles having various sizes and various temperatures at which they can be released form the filter are accumulated in a vehicle's particle trap filter, and since Bunting's method, as discussed above, involves increasing the temperature of the exhaust gas from a first temperature to a second, higher temperature in order to ensure the regeneration of the filter, it is expected that differently sized particles are being removed from the filter at the different temperatures in the method of Bunting.

18. With regard to claim 3, in the method of Bunting in view of Lemaire, an engine controller uses the parameters of engine speed and engine load (read on *parameters affecting operating conditions of the internal combustion engine*) to calculate the volumetric flow of particles (reads on *amount of particles*) generated by the engine, and a regeneration parameter that is an estimate of the first degree of plugging of the filter is calculated with the computed volumetric flow of particles and the pressure differential across the filter (reads on *filtering characteristics of the filter*; Par. 0046 and 0059 of Bunting).

19. With regard to claim 4, in the method of Bunting in view of Lemaire, the first degree of plugging of the filter is estimated by measuring the pressure differential across the filter (reads on *flow resistance in the filter*; Par. 0059 of Bunting).

20. With regard to claim 5, in the method of Bunting in view of Lemaire, the selection of the second gear ratio in the vehicle transmission depends on a comparison of the regeneration parameter that is an estimate of the second degree of plugging of the filter and standard regeneration parameter values (which are the different regions shown in Figure 6; Par. 0077 of Bunting).

21. With regard to claim 6, in the method of Bunting in view of Lemaire, the second selected gear ratio is maintained during a time interval, and the selection of the second gear ratio in the vehicle transmission for that time interval depends on a comparison of the regeneration parameter that is an estimate of the second degree of plugging of the filter and a degree of plugging that is desirable to have at the end of the regeneration process (Par. 0077 of Bunting).

22. With regard to claim 7, Bunting teaches a motor vehicle comprising an internal combustion engine that sends exhaust to an exhaust system comprising a particle trap filter, a control means, and a transmission drivable by the engine (Par. 0036; Par. 0068). By way of the control means, the motor vehicle is programmed to perform a method of regenerating (reads on *cleaning*) the particle trap exhaust filter (Par. 0077). In the regeneration method of Bunting, the pressure differential across the filter is measured (in step 136 of Figure 2B), and as taught by Bunting, that measurement is indicative of the degree of plugging of the filter (Par. 0077, 0059, 0044, 0064; Figure

2B). This measurement of the pressure differential provides a parameter that Bunting refers to as the regeneration parameter (Par. 0077). This regeneration parameter is compared to standard regeneration parameter values (which are the different regions shown in Figure 6), and depending on the degree of plugging, a different gear ratio in the transmission (item 42' in Figure 12) can be selected in order to increase the exhaust gas temperature such that the filter is exposed to hotter exhaust gas that can regenerate the filter (Par. 0077; Figures 2B and 14). Bunting teaches that if the filter is determined by the pressure differential measurement to be plugged to a certain extent, a gear ratio is selected in order to produce high temperature exhaust gas that can serve to regenerate the filter, and Bunting teaches that if the filter is determined by the pressure differential measurement to be plugged to a larger extent, a gear ratio is selected in order to produce higher temperature exhaust gas that can serve to regenerate the filter (Par. 0077). Bunting teaches repeating this process of measuring the pressure differential, comparing the resulting regeneration parameter to standard regeneration parameter values, and selecting an appropriate gear ratio such that the process is repeated multiple times in order to ensure regeneration of the filter (Par. 0077 and 0059; Figures 14 and 2B).

23. Bunting does not specifically teach that his apparatus performs an embodiment of his method in which after using a first degree of plugging as indicated by a pressure differential measurement to select a first gear ratio in the transmission in order to produce high temperature exhaust gas, the process is repeated such that a second degree of plugging – as indicated by a pressure differential measurement – is used to

select a second gear ratio in the transmission in order to produce high temperature exhaust gas.

24. Bunting teaches that the control means is programmed to repeat the process of measuring the pressure differential, comparing the resulting regeneration parameter to standard regeneration parameter values, and selecting an appropriate gear ratio such that regeneration of the filter can be advantageously ensured while the vehicle is operated, and Bunting teaches that depending on the degree of plugging, exhaust temperature values of different magnitudes can be produced in order to ensure regeneration of the filter. Therefore, the apparatus of Bunting is considered to be capable of performing a method wherein after a first degree of plugging – as indicated by a first pressure differential measurement – is used to select a first gear ratio in the transmission in order to produce exhaust gas at a first high temperature, a second degree of plugging – as indicated by a second pressure differential measurement – is used to select a second gear ratio in the transmission in order to produce exhaust gas at a second, higher temperature. Applicant's limitations specifying that the control means of the claimed apparatus performs a method wherein after a first degree of plugging – as indicated by a first pressure differential measurement – is used to select a first gear ratio in the transmission in order to produce exhaust gas at a first temperature, a second degree of plugging – as indicated by a second pressure differential measurement – is used to select a second gear ratio in the transmission in order to produce exhaust gas at a second temperature represent intended use of the claimed apparatus, and therefore those limitations are not given patentable weight (see MPEP

2114). Such intended use limitations are relevant only to the extent that a prior art apparatus used to reject such limitations only needs to be structurally capable of performing the intended use limitations.

25. Bunting does not explicitly teach that the particle trap filter has different particle types.

26. Lemaire teaches that the particles trapped in a vehicle's particle trap filter vary in size, and Lemaire teaches that the differently sized particles have different temperatures at which they can be released from the filter (Col. 1, 17-25; Col. 6, 13-47; Table 2).

27. Although Bunting does not explicitly teach that his filter contains different particles that are removed at different temperatures used in his filter regeneration method, it is expected that the particle trap filter has different particle types because it is known in the art of vehicular particle trap filters that such filters accumulate differently sized particles that have different temperatures at which they can be released from the filter. Therefore, the apparatus of Bunting in view of Lemaire satisfies all of the structural limitations of claim 7 because the apparatus of Bunting in view of Lemaire is structurally capable of performing a method wherein after a first degree of plugging – as indicated by a first pressure differential measurement – is used to select a first gear ratio in the transmission in order to produce exhaust gas at a first high temperature such that a first type of particle can be removed from the filter, a second degree of plugging – as indicated by a second pressure differential measurement – is used to select a second gear ratio in the transmission in order to produce exhaust gas at a second,

higher temperature such that a second, different type of particle can be removed from the filter.

28. With regard to claim 8, the control means of the apparatus of Bunting in view of Lemaire includes a controller for controlling the engine and a controller for controlling the transmission (Par. 0068 of Bunting).

29. With regard to claim 10, in the apparatus of Bunting in view of Lemaire, the control means (reads on *estimator*) uses the parameters of engine speed and engine load (read on *parameters affecting engine operating conditions*) to calculate the volumetric flow of particles (reads on *amount of particles*) generated by the engine, and a regeneration parameter that is an estimate of the degree of plugging of the filter is calculated with the computed volumetric flow of particles and the pressure differential across the filter (reads on *filtering characteristics of the filter*; Par. 0046 and 0059 of Bunting).

30. With regard to claim 11, in the apparatus of Bunting in view of Lemaire, pressure sensors are arranged to estimate the degree of plugging of the filter depending on the pressure differential between the exhaust gas pressure and the ambient pressure (reads on *flow resistance in the filter*; Par. 0059 of Bunting).

31. With regard to claim 12, in the apparatus of Bunting in view of Lemaire, the control means performs the selection of gear ratio in the vehicle transmission depending on a comparison of the regeneration parameter, which is an estimate of the degree of plugging of the filter, and standard regeneration parameter values (which are the different regions shown in Figure 6; Par. 0077 of Bunting).

32. With regard to claim 13, in the apparatus of Bunting in view of Lemaire, the selected gear ratio is maintained during a time interval, and the selection of the gear ratio in the vehicle transmission for that time interval depends on a comparison of the regeneration parameter that is an estimate of the degree of plugging of the filter and a degree of plugging that is desirable to have at the end of the regeneration process (Par. 0077 of Bunting).

33. With regard to claims 14 and 15, the combination of Bunting in view of Lemaire used to reject claim 1 teaches an algorithm that is stored in the internal memory of the system controller (reads on *computer*) such that the controller can read and execute the steps of the algorithm, which, as discussed in the rejection of claim 1, are reasonably expected to produce the method steps specified in claim 1 (Par. 0077; Figure 14 of Bunting).

34. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0145582 to Bunting in view of U.S. Patent No. 6,093,223 to Lemaire as applied to claims 1 and 7 above, and further in view of U.S. Patent No. 5,891,409 to Hsiao et al. (hereafter referred to as "Hsiao") in view of U.S. Patent Application No. 2003/0168116 by Brenner et al. (hereafter referred to as "Brenner").

35. With regard to claim 2, the combination of Bunting in view of Lemaire does not teach that the vehicle has a catalytic converter in the exhaust system.

36. Hsiao teaches a catalytic converter for a vehicle's exhaust system that can advantageously convert NO to N_2O and O_2 (Col. 1, 19-21; Col. 7, line 30 to Col. 8, line

65). Hsiao teaches that the conversion depends on the temperature of the vehicle's exhaust gas (Col. 10, line 62 to Col. 11, line 4), and as taught by Hsiao, the conversion is advantageous because NO is harmful to the environment (Col. 7, 30-47).

37. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Bunting in view of Lemaire such that the vehicle's exhaust system has a catalytic converter of the type taught by Hsiao that can convert NO to N_2O and O_2. The motivation for performing the modification was provided by Hsiao, who taught that NO is harmful to the environment. In this modified method of Bunting in view of Lemaire in view of Hsiao, the conversion of NO to N_2O and O_2 would depend on the temperature change between the first and second temperatures because Hsiao teaches that the catalytic conversion is dependent on the temperature of the vehicle's exhaust gas.

38. The combination of Bunting in view of Lemaire in view of Hsiao does not teach that the catalytic converter is upstream of the particle trap filter.

39. Brenner teaches that in a vehicle's exhaust system, it is advantageous to place a catalytic converter upstream of a particle filter because the heat released by the catalytic converter can be advantageously carried downstream by the exhaust gas such that released heat contributes to the regeneration of the particle filter (Par. 0010).

40. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Bunting in view of Lemaire in view Hsiao such that the catalytic converter is upstream of the particle filter. The motivation for performing the modification was provided by Brenner, who teaches that it is advantageous to place a

catalytic converter upstream of a particle filter because the heat released by the catalytic converter can be advantageously carried downstream by the exhaust gas such that released heat contributes to the regeneration of the particle filter.

41. Further with regard to claim 2, the combination of Bunting in view of Lemaire in view Hsiao in view of Brenner does not explicitly teach that the oxygen generated by the catalytic converter functions to combust particles that are caught in the filter, but since the combination of Bunting in view of Lemaire in view Hsiao in view of Brenner teaches performing the same method steps with the same materials as those claimed by applicant, the effect of having the oxygen function to combust particles in the filter is expected to occur. The oxygen would be expected to therefore reduce the first degree of plugging when the regeneration method is performed to reduce the first degree of plugging.

42. With regard to claim 9, the apparatus of the combination of Bunting in view of Lemaire does not have a catalytic converter.

43. Hsiao teaches a catalytic converter for a vehicle's exhaust system that can advantageously convert NO to N_2O and O_2 (Col. 1, 19-21; Col. 7, line 30 to Col. 8, line 65). Hsiao teaches that the conversion depends on the temperature of the vehicle's exhaust gas (Col. 10, line 62 to Col. 11, line 4), and as taught by Hsiao, the conversion is advantageous because NO is harmful to the environment (Col. 7, 30-47).

44. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Bunting in view of Lemaire such that the vehicle's exhaust system has a catalytic converter of the type taught by Hsiao that can convert

NO to N_2O and O_2 depending on the temperature. The motivation for performing the modification was provided by Hsiao, who taught that NO is harmful to the environment. In the apparatus of Bunting in view of Lemaire in view of Hsiao, the conversion of NO to N_2O and O_2 would depend on temperature changes of the exhaust gas because Hsiao teaches that the catalytic conversion is dependent on exhaust gas temperature.

45. The combination of Bunting in view of Lemaire in view of Hsiao does not teach that the catalytic converter is upstream of the particle trap filter.

46. Brenner teaches that in a vehicle's exhaust system, it is advantageous to place a catalytic converter upstream of a particle filter because the heat released by the catalytic converter can be advantageously carried downstream by the exhaust gas such that released heat contributes to the regeneration of the particle filter (Par. 0010).

47. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Bunting in view of Lemaire in view Hsiao such that the catalytic converter is upstream of the particle filter. The motivation for performing the modification was provided by Brenner, who teaches that it is advantageous to place a catalytic converter upstream of a particle filter because the heat released by the catalytic converter can be advantageously carried downstream by the exhaust gas such that released heat contributes to the regeneration of the particle filter.

48. Further with regard to claim 9, the combination of Bunting in view of Lemaire in view Hsiao in view of Brenner does not explicitly teach that the oxygen generated by the catalytic converter functions to combust particles that are caught in the filter, but since the combination of Bunting in view of Lemaire in view Hsiao in view of Brenner teaches

the same apparatus as that claimed by applicant, the effect of having the oxygen function to combust particles in the filter is expected to occur.

Response to Arguments

49. Applicant's arguments filed January 11, 2010 have been fully considered but they are not persuasive.

50. Applicant argues that the Bunting reference does not teach a method for controlling an engine and a transmission in order to clean a filter of different types of undesired particles. However, as clearly presented in this office action and the examiner's non-final office action, Bunting teaches a method of controlling a vehicle's engine and transmission in order to clean a vehicle's particle filter, and although Bunting does not specifically teach that such a filter has different types of undesired particles that can be removed at different temperatures, the Lemaire reference provides sufficient evidence to state that the filter treated with Bunting's method would be expected to have such different types of particles.

51. Applicant argues that Bunting only teaches a temperature limit that has to be overcome in order to regenerate the filter, and that therefore, Bunting does not teach varying the exhaust temperature with the intent of removing different types of particles from the filter. However, Bunting teaches raising the temperature limit that has to be overcome in accordance with the degree to which the filter is plugged such that when performing Bunting's method, the temperature can be increased to a first extent and then increased to a greater extent in order to regenerate the filter. Since the filter is

expected to have different particles types that are removed at different temperatures, one of ordinary skill in the art would expect different types of particles to be removed when the method of Bunting is performed such that the filter is cleaning by having the exhaust gas heated to a first temperature and then to a second, higher temperature.

52. Applicant also argues that the claim amendments submitted January 11, 2010 overcome the examiner's rejections. However, modified rejections have been presented in this office action.

Conclusion

53. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

54. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

55. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN COLEMAN whose telephone number is (571)270-7376. The examiner can normally be reached on Monday-Friday, 9-5.

56. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on (571)272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

57. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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